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ABSTRACT

The purpose of this study was to determine the institutional and athletic characteristics that had the greatest relationship to divisional declarations in selected sports in women's athletic programs and the number of sports offered in women's athletic programs. Institutions were grouped according to similar characteristics, e.g., enrollment, financial support, degrees offered, and type of institution. The results indicate that the majority of institutions are placing their men's and women's sports in the same competitive division. However, there are many men's programs that are in a more competitive division than the women's programs are, while there are very few women's sports in a more competitive division than the men's programs. As a result, it could be concluded that some institutions are not providing the same opportunities for women as they are for men in regard to divisional declarations. It also appears that the majority of institutions are not offering the same opportunities to women as they are to men, since the men's programs generally offer a larger number of sports activities. (Author/JD)

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RELATIONSHIPS OF INSTITUTIONAL AND ATHLETIC PROGRAM CHARACTERISTICS TO AIAW DIVISIONAL DECLARATIONS AND NUMBER OF SPORTS

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The purpose of this study was to determine the institutional and athletic characteristics that had the greatest relationship to divisional declarations in selected sports in women's athletic programs and the number of sports offered in women's athletic programs. The population consisted of Association for Intercollegiate Athletics for Women (AIAW) member institutions included in the AIAW Directory, 1979-80. Institutions included in the study were those schools (536) that completed and returned the questionnaire sent to the athletic directors of the women's programs and that also completed and returned to the Office of Health, Education and Welfare (HEW) the Higher Education General Information Surveys (HEGIS) for 1977-78 and 1978-79. The institutions were grouped through the process of cluster analysis according to similar institutional characteristics. A multiple discriminant analysis function was then performed on each of the categorical dependent variables of basketball, tennis, track/field, and volleyball divisional declarations within each cluster. A multiple regression was done on the continuous dependent variable of number of sports in the women's athletic program within each cluster. Chi-squares were performed to show the relationships between: divisional declarations in the four selected sports in the women's program and the number of sports offered in the women's program; divisional declarations in the four selected sports in the women's program and the divisional declaration in the men's program; number of sports offered in the women's program and the number of sports offered in the men's program.

Women have participated in sports for many years; however, the idea of women competing in sports has been viewed with ambivalence for centuries. Myths and misconceptions associated with women participating in athletics continue

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to exist which make it all the more difficult for women to gain acceptance in sport. Women fought for the right to compete and be recognized in athletics, and with this persistence, they gradually became involved in physical activity and competitive athletics. Although the opportunities available and the extent of competition were limited, they maintained a desire to participate. It was not until the adoption of Title IX in 1972 that women's athletics at the high school and college levels began to suddenly "come into its own". Women's athletics have grown tremendously from the days in which competitive athletics were discouraged and often denied, to the present time, when budgets, scholarships, coaching staffs, and opportunities are increasing constantly for the female athlete. However, despite these advancements, women's athletics remain giant strides behind the world of men's athletics as evidenced in this study.

Purpose

The problem of this study was to determine the relationships, if any, of institutional and athletic program characteristics to AIAW divisional declarations and number of women's sports. Specifically, the problem was to:

1. Determine the similarities, if any, within and between clusters of institutions by examining institutional characteristics;

2. Determine the institutional and athletic program factors, if any, that hold the greatest relationships to divisional declarations in selected sports in women's athletic programs;

3. Determine the institutional and athletic factors, if any, that hold the greatest relationships to the number of sports offered in the women's athletic programs;

4. Determine the relationships between divisional declarations in the women's program and number of sports in the women's program; between divisional declarations in the women's program and divisional declarations in the men's

program; and between number of sports in the women's program and the number of sports in the men's program.

Procedures

The population consisted of all AIAW member institutions that filed a membership application form for the 1978-79 academic year. The directors of the women's athletic programs were requested to complete the questionnaire that was sent to them. The institutions that returned this questionnaire and responded to the 1977-78 and 1978-79 HEGIS Surveys from HEW were included in the study (536).

Institutions were clustered according to 13 characteristics which included various aspects of an institution such as enrollment, financial support, degrees awarded, and type of institution. The P2M Cluster Analysis of Variables was used to obtain the clusters.[1] Initially in the cluster analysis, each institution composed its own cluster. At each progressive step of analysis, the two clusters reporting data that exhibited the shortest distance between the sum of the standard scores of all variables, were combined and thereafter treated as one cluster. This procedure of combining clusters continued until all institutions formed one cluster. The earlier that clusters were formed, the more similar were the institutions within those clusters. After all institutions were clustered, eight separate clusters were determined from diagrams printed out on the institutions.

A multiple discriminant analysis function was then performed on each of the categorical dependent variables of basketball, tennis, track/field and volleyball divisional declarations within each cluster. A total of 32 multiple discriminant analysis functions were included. Variables were determined within each cluster that were best able to discriminate between the divisional declarations of selected sports in the women's program.

[1]W. J. Dixon and M.B. Brown, "P2M Cluster Analysis of Variables," BMDP: Biomedical Computer Program, P-Series, 1977 (Los Angeles, California: University of California Press, School of Medicine, 1977), pp. 90-95.

A multiple regression was done on the continuous dependent variable of number of sports in the women's program within each cluster. A total of eight multiple regressions were included. Variables were determined within each cluster that were best able to predict the number of sports in the women's program.

Three chi-squares were performed that showed the relationships between:

1. divisional declarations in the four selected sports in the women's program and the number of sports offered in the women's program;

2. divisional declarations in the four selected sports in the women's program and the divisional declaration in the men's program;

3. number of sports offered in the women's program and the number of sports offered in the men's program.

The independent variables included in the multiple discriminant analyses and the multiple regressions were: scholarship budget of the women's program, operating budget of the women's program, percent of operating budget of the women's program supported by student fees, salaries of the women's athletic staff, number of sports offered in the men's program, divisional declaration of the men's program, regional geographic location of the women's program, gifts and endowment income of the institution, total students enrolled, and percent of graduate students enrolled. Additionally, the variable, number of participants in the women's program was considered in the discriminant analyses; and the variable, research dollars spent by the institution, was utilized in the multiple regressions.

A .05 level of significance was used whenever appropriate inferential statistical analyses were computed throughout the study.

Results

Each determined cluster of institutions in this study, as a group, possessed unique characteristics. The numeric values assigned to the characteristics of each cluster rarely crossed the numeric values assigned to the characteristics

of the other clusters (Figure 1). Each cluster was distinguishable and describable in itself as determined by the institutional variables on which the analysis was performed.

The men's athletic program and financial support by the institution of the athletic program showed the highest relationships to divisional declarations and number of sports in the women's program. Specifically, divisional classification for the men's program and financial support of the women's program by the university through operating, salary and scholarship budgets, had the highest relationships to divisional declarations in selected sports in the women's program than any other athletic characteristics or any institutional characteristics in large and small, public and private institutions (Table 1). The variable, number of men's sports, was the best predictor of the number of women's sports in the program than any other athletic characteristics or any institutional characteristics in large and small, public and private institutions (Table 2).

Generally, approximately 75 percent of the selected sports within the women's athletic programs were classified correctly in divisions within clusters according to the institutional characteristics defining each cluster and the athletic program and institutional characteristics defining each division within that cluster. Approximately 25 percent of the institutions within each cluster, however, were actually in a division for a sport(s) which was not typical of other institutions within that cluster with similar institutional and athletic program characteristics.

Divisional declarations for the men's programs and for the selected sports in the women's programs were the same in approximately 80 percent of the institutions. In approximately 16 percent of the institutions, however, the men's program declared Division I or II, while the selected sports in the women's program declared Division II or III. On the other hand, only approximately

4 percent of the selected sports in the women's programs declared Division I or II, while the men's program declared Division II or III (Table 3).

A total of 43 percent of the institutions offered the same range of number of sports in the men's and women's programs. However, 55 percent of the institutions offered a higher range of number of sports in the men's program than in the women's program, whereas less than two percent of the institutions offered a higher range of number of sports in the women's program than in the men's program. Eighty-one percent of the institutions that offered a higher range of men's sports than women's sports were categorized in the next highest range. However, 19 percent were at least two groups higher than the women's program, and therefore offered at least four more sports than the women's program (Table 4).

Institutions declaring Division I in selected sports in the women's athletic programs generally offered a greater number of sports for the women. Institutions declaring Division II offered the least number of sports on the average for women. Division III institutions generally offered slightly more sports than Division II institutions, and fewer than Division I institutions (Table 5).

There were no significant discriminating or predicting variables that consistently distinguished between public or private, large or small, or other classifications of institutions.

Discussion

The results of this study indicate that divisional declaration for the men's program and financial support of the women's program by the university through operating, salary and scholarship budgets, had the highest relationships to divisional declarations in selected sports in the women's program than any other athletic characteristics or any institutional characteristics in large and small, public and private institutions. Although other institutional and athletic program characteristics were significant in most clusters, the men's athletic

program and financial support by the institution of the athletic program were most related to the AIAW divisional declarations and number of sports in the women's program. These results seem logical, since AIAW divisional criteria are based on scholarship limits that require a sound financial base. Additionally, Title IX implications would encourage similar divisional declarations and number of sports for men and women to provide equal opportunity programs.

In sports where a more competitive division was declared than was predicted, it could be concluded that more institutional and/or athletic program support was given that sport than was typical of the support given by other similar institutions within that cluster. In sports where a less competitive division was declared than was predicted, it could be concluded that less institutional and athletic program support was given that sport than was typical of the support given by other similar institutions within that cluster.

The results indicate that the majority of institutions are placing their men's and women's sports in the same competitive division. However, there are many men's programs that are in a more competitive division than sports in the women's programs, while there are very few women's sports in a more competitive division than the men's programs. As a result, it could be concluded that some institutions are not providing the same opportunities for women as they are for men in regard to divisional declarations. It also appears that the majority of institutions are not offering the same opportunities to women as they are to men since the men's programs are generally more broad in the number of sports offered.

Since Division I institutions generally offer a greater number of women's sports, it could be concluded that Division I institutions have larger athletic program budgets, allowing them to offer more sports. Additionally, according to Division I criteria, more scholarships are permitted in Division I than in any other division, thereby increasing the cost of the athletic program for Division I

institutions. Also according to divisional criteria, Division III institutions are permitted to offer the fewest scholarships. This could perhaps lead one to judge that the number of sports offered in Division III would also be the fewest number due to financial implications. However, according to the data, more sports were offered in Division III institutions than in Division II institutions. One conclusion could be made that Division III institutions are able to financially support broader programs since very little money is allowed in that division for athletic scholarships. On the other hand, Division II institutions generally elect to provide more scholarships, thereby limiting the number of sports that can be offered due to consequential financial restrictions of funding scholarships. A recommendation would be that if in the future AIAW should determine a number of required sports for divisional declaration, these numbers should vary by division. A definition of "limited", "average", and "broad" women's athletic program must be considered for each division, rather than incorporating one definition for all divisions because of the wide range of institutional differences between divisions.

Finally, it can be concluded from the results of this study that the men's athletic program and the amount of financial assistance given by the institution most determine the extent of the women's athletic program. While one can assume from other valid data and studies that Title IX has had a tremendous influence on the growth of women's athletics, this study shows that many institutions are not yet providing equal opportunities for women in athletics, based on the number of sports and divisional competition offered for men and women.

FIGURE 1

MEANS OF THE STANDARD SCORES OF
VARIABLES FOR EACH CLUSTER

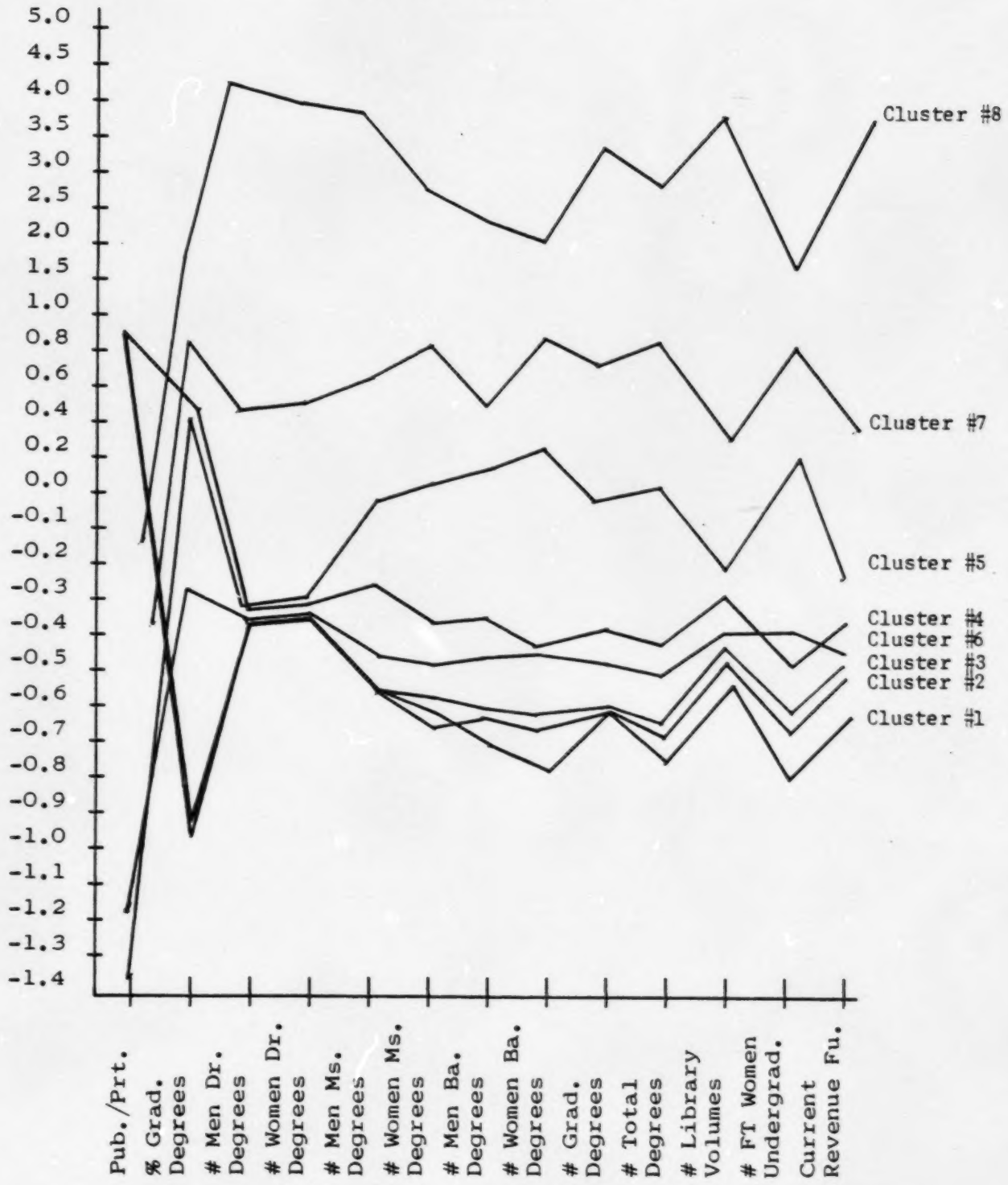

TABLE 1

VARIABLES STATISTICALLY RELATED TO DIVISIONAL DECLARATIONS IN BASKETBALL, TENNIS, TRACK/FIELD, AND VOLLEYBALL WITHIN CLUSTERS

Cluster	#1 Significant Variable	#2 Significant Variable
1	Operating Budget	NCAA Division
2	NCAA Division (1st or 2nd)	Percent of Graduate Students (1st or 2nd)
3	Total Student Enrollment	Scholarship Budget
4	Scholarship Budget	NCAA Division
5	NCAA Division	Number of Men's Sports
6	Operating Budget	Number of Women Athletes
7	NCAA Division	Salary Budget
8	Salary Budget	Region

TABLE 2

VARIABLES STATISTICALLY RELATED TO NUMBER OF SPORTS IN THE WOMEN'S PROGRAM WITHIN CLUSTERS

Cluster	#1 Significant Variable	#2 Significant Variable
1	Number of Men's Sports	Region
2	Number of Men's Sports	Salary Budget
3	Operating Budget	NCAA Division
4	Endowment Income	Research Expenditures
5	Number of Men's Sports	Region
6	Number of Men's Sports	Salary Budget
7	Number of Men's Sports	Salary Budget
8	Number of Men's Sports	—

TABLE 3

DIVISIONAL DECLARATIONS IN SELECTED SPORTS IN THE WOMEN'S PROGRAMS AND DIVISIONAL DECLARATION IN THE MEN'S PROGRAMS

Division	Percent			
	Basketball	Tennis	Track/Field	Volleyball
NCAA and AIAW Same Division	80.7	78.5	83.8	80.2
NCAA 1 or 2 and AIAW 2 or 3	11.8	17.8	14.0	15.8
NCAA 2 or 3 and AIAW 1 or 2	7.5	3.7	2.2	4.0

TABLE 4

NUMBER OF SPORTS OFFERED IN THE MEN'S AND WOMEN'S ATHLETIC PROGRAMS

Number of Sports	Men's Program		Women's Program	
	Number	Percent	Number	Percent
1 to 3 sports	27	5.3	76	15.0
4 to 6 sports	126	24.9	228	45.0
7 to 9 sports	204	40.2	157	31.0
10 to 12 sports	117	23.1	35	6.9
13 to 16 sports	27	5.3	11	2.2
17 to 22 sports	6	1.2	0	0.0

TABLE 5

AVERAGE NUMBER OF SPORTS IN THE WOMEN'S ATHLETIC PROGRAM BY DIVISION FOR SELECTED SPORTS IN THE PROGRAM

Sport	Division I	Division II	Division III
Basketball	7.7	5.1	6.1
Tennis	8.0	5.7	6.3
Track/Field	8.9	6.6	6.6
Volleyball	8.0	5.4	6.0
Average	8.1	5.5	6.2

Overall Average--6.4

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